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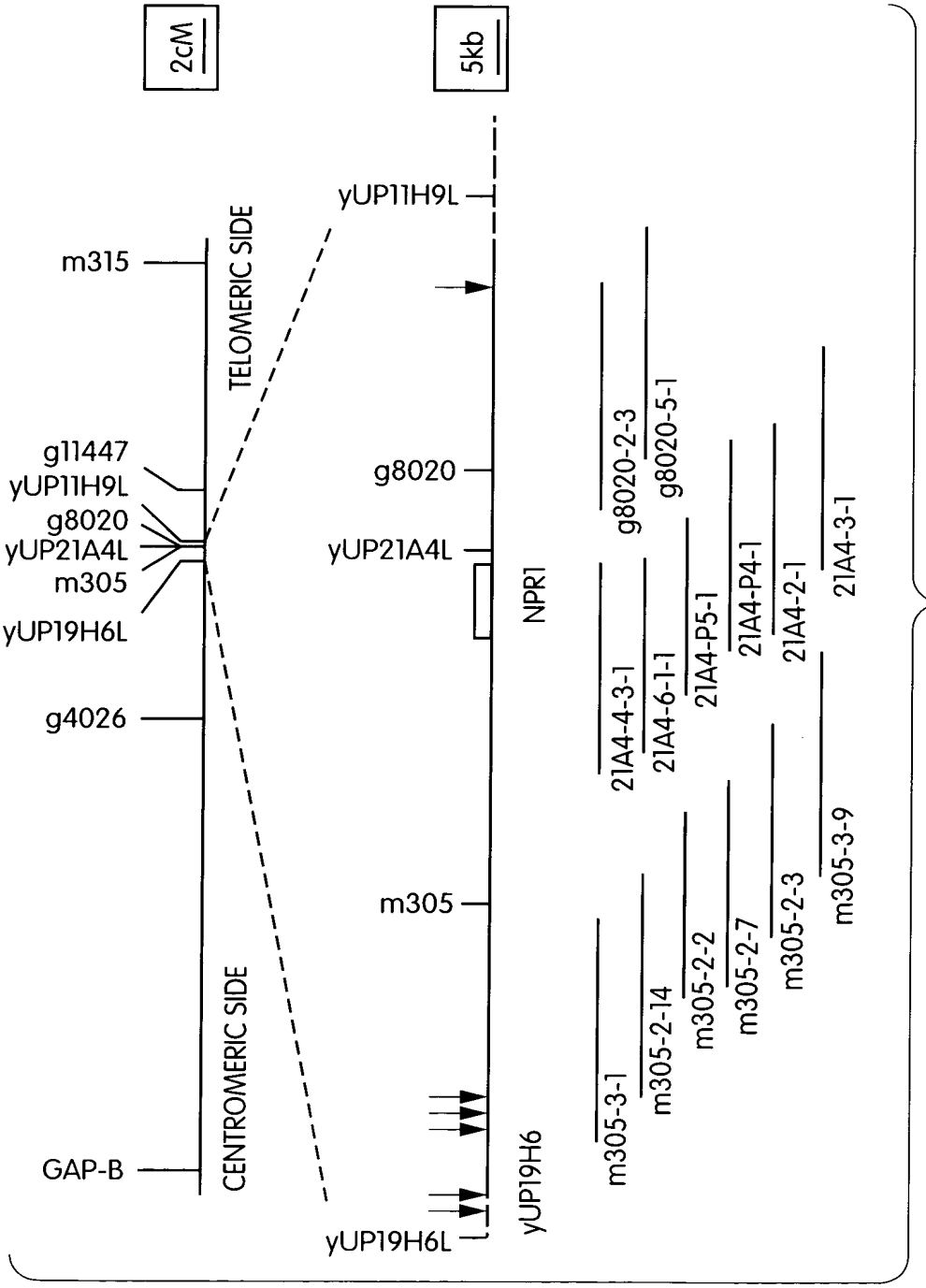

Fig.1

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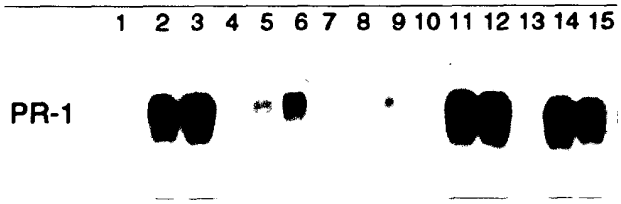

Fig. 2A

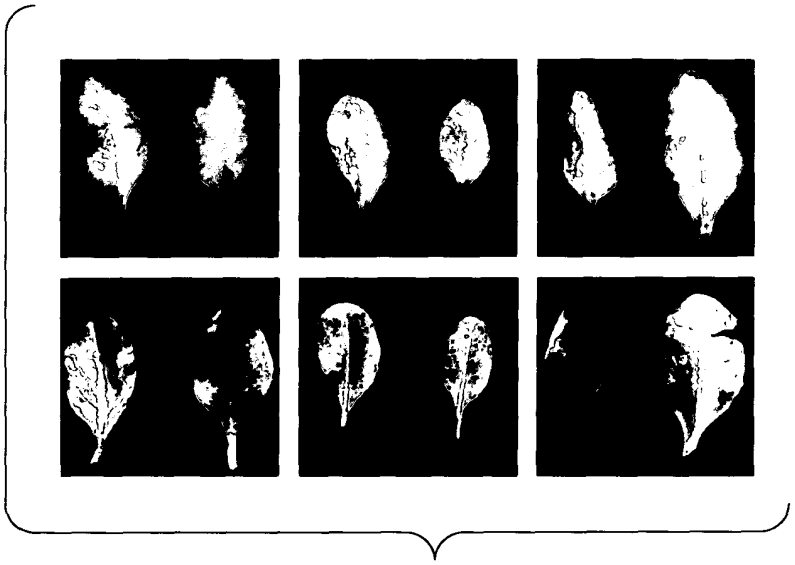

Fig. 2B

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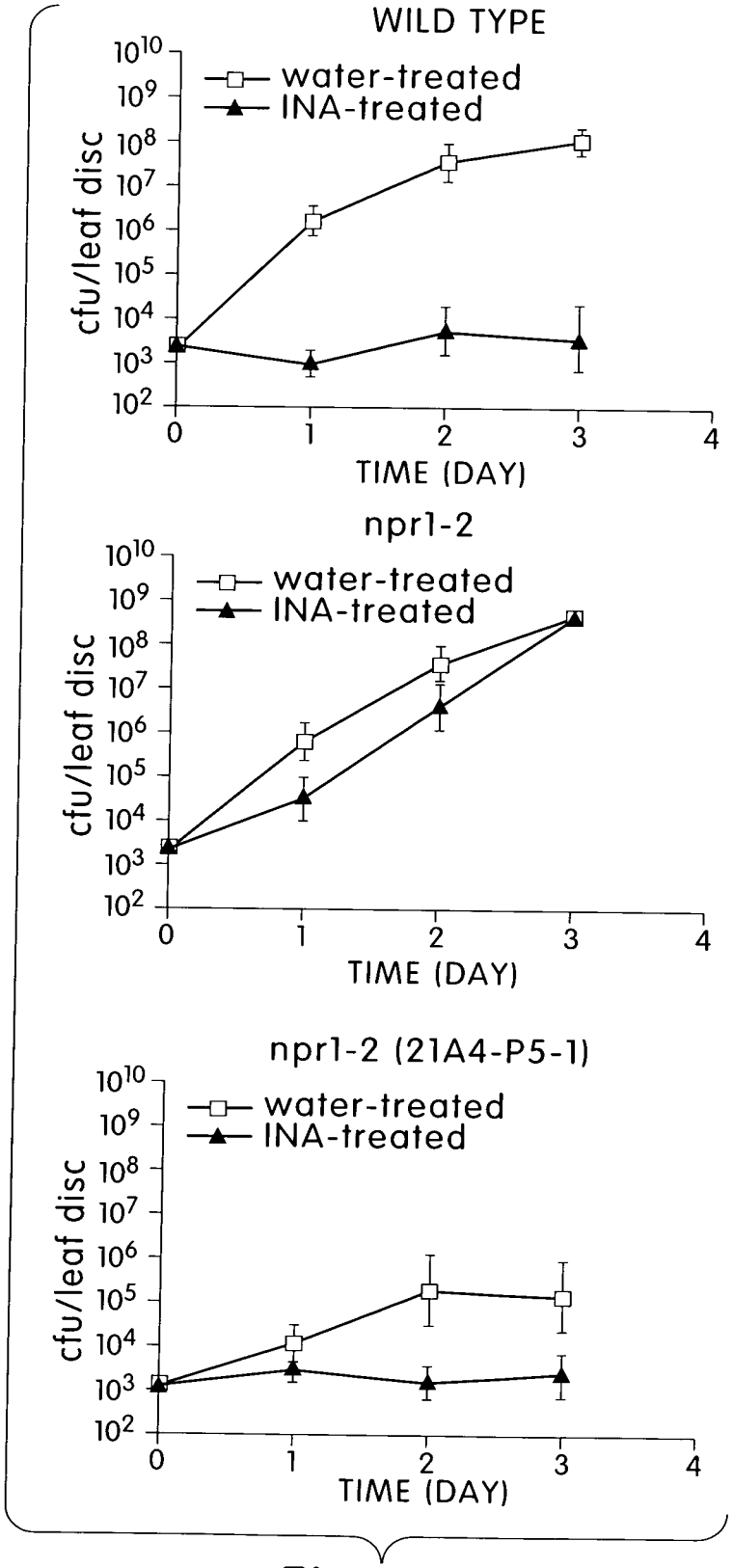

Fig. 2C

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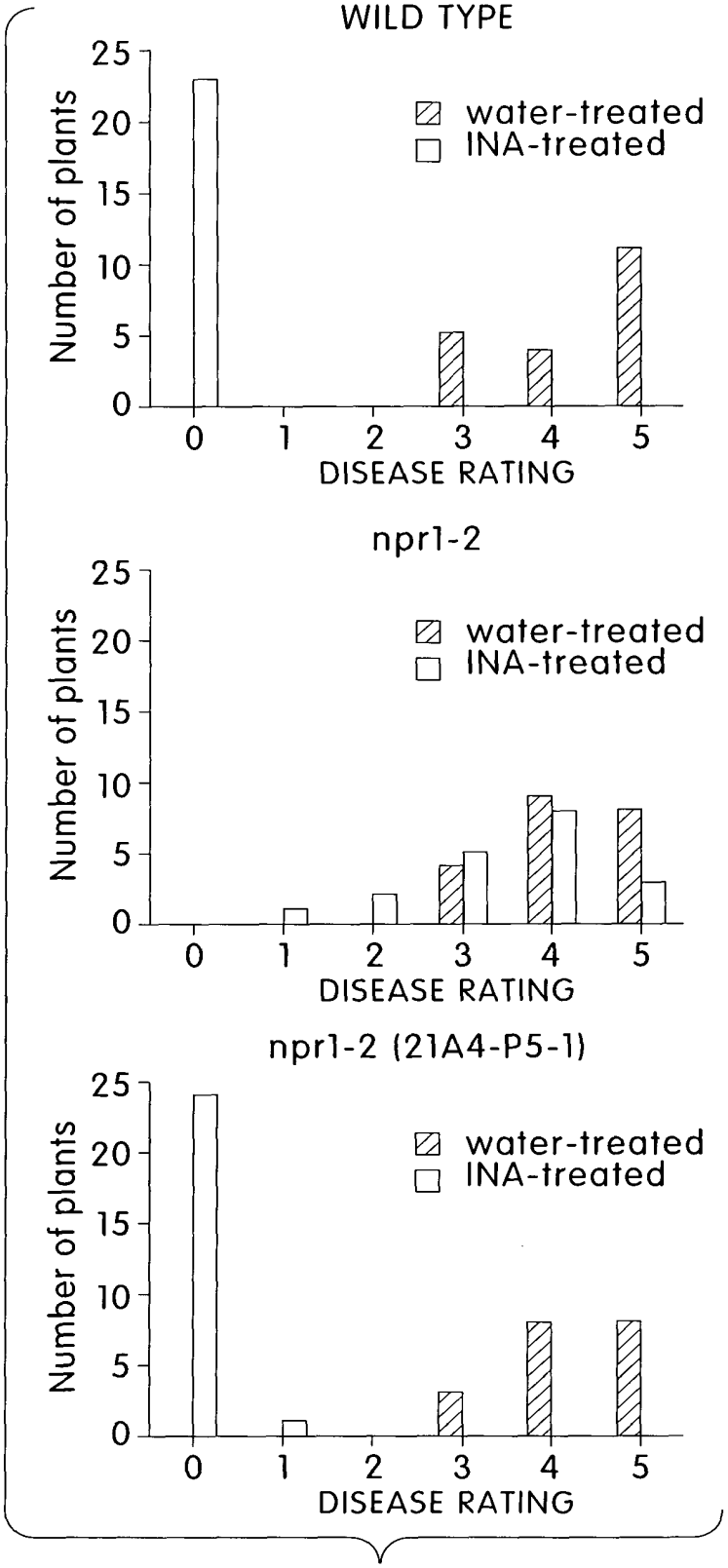

Fig. 2D

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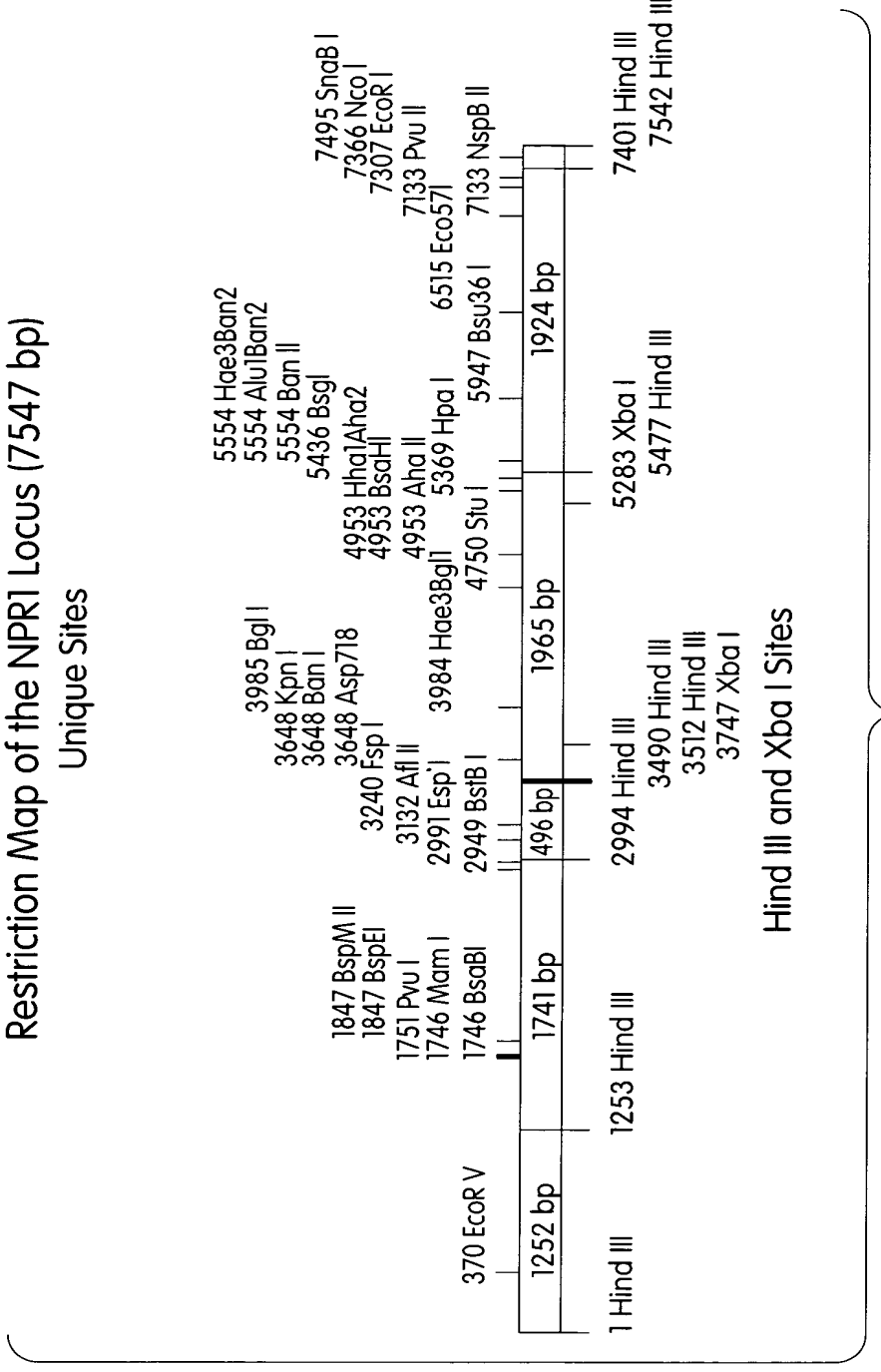

Fig. 3

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          10          20          30          40          50
           *           *           *           *           *
AAGCTTGTGA TGCAAGTCAT GGGATATTGC TTTGTGTTAA GTATACAAAA
TTCGAACACT ACGTTCAGTA CCCTATAACG AAACACAATT CATATGTTTT

          60          70          80          90         100
           *           *           *           *           *
CCATCACGTG GATACATAGT CTTCAAACCA ACCACTAAAC AGTATCAGGT
GGTAGTGCAC CTATGTATCA GAAGTTTGGT TGGTGATTTG TCATAGTCCA

         110         120         130         140         150
           *           *           *           *           *
CATACCAAAG CCAGAAGTGA AGGGTTGGGA TATGTCATTG GGTTTAGCGG
GTATGGTTTC GGTCTTCACT TCCCAACCCT ATACAGTAAC CCAAATCGCC

         160         170         180         190         200
           *           *           *           *           *
TAATCGGATT GAACCCTTTC CGGTATAAAA TACAAAGGCT TTCGCAGTCT
ATTAGCCTAA CTTGGGAAAG GCCATATTTT ATGTTTCCGA AAGCGTCAGA

         210         220         230         240         250
           *           *           *           *           *
CGGCGTATGT GTATGTCTCG GGGTATCTAC CATTTGAATC ACAGAACTTT
GCCGCATACA CATACAGAGC CCCATAGATG GTAAACTTAG TGTCTTGAAA

         260         270         280         290         300
           *           *           *           *           *
TATGTGCGAA GTTTTCGATT CTGATTCGTT TACCTGGAAG AGATTAGAAA
ATACACGCTT CAAAAGCTAA GACTAAGCAA ATGGACCTTC TCTAATCTTT

         310         320         330         340         350
           *           *           *           *           *
TTTGCGTCTA CCAAAAACAG ACAGATTAAT TTTTTCCAAC CCGATACAAG
AAACGCAGAT GGTTTTTGTC TGTCTAATTA AAAAAGGTTG GGCTATGTTC

         360         370         380         390         400
           *           *           *           *           *
TTTCGGGGTT CTTGCATTGG ATATCACGGA ACAACAATGT GATCCGGTTT
AAAGCCCCAA GAACGTAACC TATAGTGCCT TGTTGTTACA CTAGGCCAAA

         410         420         430         440         450
           *           *           *           *           *
TGTCTCAAAA CCGAAACTTG GTCCTTCTTC CATACTCCGA ACTCTGATGT
ACAGAGTTTT GGCTTTGAAC CAGGAAGAAG GTATGAGGCT TGAGACTACA

         460         470         480         490         500
           *           *           *           *           *
TTTCTCAGGA TTAGTCAGAT ACGAAGGGAA GCTAGGTGCT ATTCGTCAGT
AAAGAGTCCT AATCAGTCTA TGCTTCCCTT CGATCCACGA TAAGCAGTCA

         510         520         530         540         550
           *           *           *           *           *
GGACAAACAA AGATCAAGAA GATGTTCACG AGTTATGGGT TTTAAAGAGC
CCTGTTTGTT TCTAGTTCTT CTACAAGTGC TCAATACCCA AAATTTCTCG
```

Fig. 4-1

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          560         570         580         590         600
            *           *           *           *           *
AGTTTTGAAA AGTCGTGGGT TAAAGTGAAA GATATTAAAA GCATTGGAGT
TCAAAACTTT TCAGCACCCA ATTTCACTTT CTATAATTTT CGTAACCTCA

          610         620         630         640         650
            *           *           *           *           *
AGATTTGATT ACGTGGACTC CAAGCAACGA CGTTGTATTG TTTCGTAGTA
TCTAAACTAA TGCACCTGAG GTTCGTTGCT GCAACATAAC AAAGCATCAT

          660         670         680         690         700
            *           *           *           *           *
GTGATCGTGG TTGCCTCTAC AACATAAACG CAGAGAAGTT GAATTTAGTT
CACTAGCACC AACGGAGATG TTGTATTTGC GTCTCTTCAA CTTAAATCAA

          710         720         730         740         750
            *           *           *           *           *
TATGCAAAAA AAGAGGGATC TGATTGTTCT TTCGTTTGTT TTCCGTTTTG
ATACGTTTTT TTCTCCCTAG ACTAACAAGA AAGCAAACAA AAGGCAAAAC

          760         770         780         790         800
            *           *           *           *           *
TTCTGATTAC GAGAGGGTTG ATCTGAACGG AAGAAGCAAC GGGCCGACAC
AAGACTAATG CTCTCCCAAC TAGACTTGCC TTCTTCGTTG CCCGGCTGTG

          810         820         830         840         850
            *           *           *           *           *
TTTAAAAAAA AAATAAAAAA AATGGGCCGA CAAATGCAAA CGTAGTTGAC
AAATTTTTTT TTTATTTTTT TTACCCGGCT GTTTACGTTT GCATCAACTG

          860         870         880         890         900
            *           *           *           *           *
AAGGATCTCA AGTCTCAAGT CTCAATTGGC TCGCTCATTG TGGGGCATAA
TTCCTAGAGT TCAGAGTTCA GAGTTAACCG AGCGAGTAAC ACCCCGTATT

          910         920         930         940         950
            *           *           *           *           *
ATATATCTAG TGATGTTTAA TTGTTTTTTA TAAGGTAAAA AGGAATATTG
TATATAGATC ACTACAAATT AACAAAAAAT ATTCCATTTT TCCTTATAAC

          960         970         980         990        1000
            *           *           *           *           *
AATTTTGTTT CTTAGGTTTA TGTAATAATA CCAAACATTG TTTTATGAAT
TTAAAACAAA GAATCCAAAT ACATTATTAT GGTTTGTAAC AAAATACTTA

         1010        1020        1030        1040        1050
            *           *           *           *           *
ATTTAATCTG ATTTTTTGGC TAGTTATTTT ATTATATCAA GGGTTCCTGT
TAAATTAGAC TAAAAAACCG ATCAATAAAA TAATATAGTT CCCAAGGACA

         1060        1070        1080        1090        1100
            *           *           *           *           *
TTATAGTTGA AAACAGTTAC TGTATAGAAA ATAGTGTCCC AATTTTCTCT
AATATCAACT TTTGTCAATG ACATATCTTT TATCACAGGG TTAAAAGAGA
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Fig. 4-2

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      1110        1120        1130        1140        1150
       *           *           *           *           *
CTTAAATAAT ATATTAGTTA ATAAAAGATA TTTTAATATA TTAGATATAC
GAATTTATTA TATAATCAAT TATTTTCTAT AAAATTATAT AATCTATATG

      1160        1170        1180        1190        1200
       *           *           *           *           *
AATAATATCT AAAGCAACAC ATATTTAGAC ACAACACGTA ATATCTTACT
TTATTATAGA TTTCGTTGTG TATAAATCTG TGTTGTGCAT TATAGAATGA

      1210        1220        1230        1240        1250
       *           *           *           *           *
ATTGTTTACA TATATTTATA GCTTACCAAT ATAACCCGTA TCTATGTTTT
TAACAAATGT ATATAAATAT CGAATGGTTA TATTGGGCAT AGATACAAAA

      1260        1270        1280        1290        1300
       *           *           *           *           *
ATAAGCTTTT ATACAATATA TGTACGGTAT GCTGTCCACG TATATATATT
TATTCGAAAA TATGTTATAT ACATGCCATA CGACAGGTGC ATATATATAA

      1310        1320        1330        1340        1350
       *           *           *           *           *
CTCCAAAAAA AACGCATGGT ACACAAAATT TATTAAATAT TTGGCAATTG
GAGGTTTTTT TTGCGTACCA TGTGTTTTAA ATAATTTATA AACCGTTAAC

      1360        1370        1380        1390        1400
       *           *           *           *           *
GGTGTTTATC TAAAGTTTAT CACAATATTT ATCAACTATA ATAGATGGTA
CCACAAATAG ATTTCAAATA GTGTTATAAA TAGTTGATAT TATCTACCAT

      1410        1420        1430        1440        1450
       *           *           *           *           *
GAAGATAAAA AAATTATATC AGATTGATTC AATTAAATTT TATAATATAT
CTTCTATTTT TTTAATATAG TCTAACTAAG TTAATTTAAA ATATTATATA

      1460        1470        1480        1490        1500
       *           *           *           *           *
CATTTTAAAA AATTAATTAA AAGAAAACTA TTTCATAAAA TTGTTCAAAA
GTAAAATTTT TTAATTAATT TTCTTTTGAT AAAGTATTTT AACAAGTTTT

      1510        1520        1530        1540        1550
       *           *           *           *           *
GATAATTAGT AAAATTAATT AAATATGTGA TGCTATTGAA TTATAGAGAG
CTATTAATCA TTTTAATTAA TTTATACACT ACGATAACTT AATATCTCTC

      1560        1570        1580        1590        1600
       *           *           *           *           *
TTATTGTAAA TTTACTTAAA ATCATACAAA TCTTATCCTA ATTTAACTTA
AATAACATTT AAATGAATTT TAGTATGTTT AGAATAGGAT TAAATTGAAT

      1610        1620        1630        1640        1650
       *           *           *           *           *
TCATTTAAGA AATACAAAAG TAAAAAACGC GGAAAGCAAT AATTTATTTA
AGTAAATTCT TTATGTTTTC ATTTTTTGCG CCTTTCGTTA TTAAATAAAT
```

Fig. 4-3

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      1660        1670        1680        1690        1700
        *           *           *           *           *
CCTTATTATA ACTCCTATAT AAAGTACTCT GTTTATTCAA CATAATCTTA
GGAATAATAT TGAGGATATA TTTCATGAGA CAAATAAGTT GTATTAGAAT

      1710        1720        1730        1740        1750
        *           *           *           *           *
CGTTGTTGTA TTCATAGGCA TCTTTAACCT ATCTTTTCAT TTTCTGATCT
GCAACAACAT AAGTATCCGT AGAAATTGGA TAGAAAAGTA AAAGACTAGA

      1760        1770        1780        1790        1800
        *           *           *           *           *
CGATCGTTTT CGATCCAACA AAATGAGTCT ACCGGTGAGG AACCAAGAGG
GCTAGCAAAA GCTAGGTTGT TTTACTCAGA TGGCCACTCC TTGGTTCTCC

      1810        1820        1830        1840        1850
        *           *           *           *           *
TGATTATGCA GATTCCTTCT TCTTCTCAGT TTCCAGCAAC ATCGAGTCCG
ACTAATACGT CTAAGGAAGA AGAAGAGTCA AAGGTCGTTG TAGCTCAGGC

      1860        1870        1880        1890        1900
        *           *           *           *           *
GAAAACACCA ATCAAGTGAA GGATGAGCCA AATTTGTTTA GACGTGTTAT
CTTTTGTGGT TAGTTCACTT CCTACTCGGT TTAAACAAAT CTGCACAATA

      1910        1920        1930        1940        1950
        *           *           *           *           *
GAATTTGCTT TTACGTCGTA GTTATTGAAA AAGCTGATTT ATCGCATGAT
CTTAAACGAA AATGCAGCAT CAATAACTTT TTCGACTAAA TAGCGTACTA

      1960        1970        1980        1990        2000
        *           *           *           *           *
TCAGAACGAG AAGTTGAAGG CAAATAACTA AAGAAGTCTT TTATATGTAT
AGTCTTGCTC TTCAACTTCC GTTTATTGAT TTCTTCAGAA AATATACATA

      2010        2020        2030        2040        2050
        *           *           *           *           *
ACAATAATTG TTTTTAAATC AAATCCTAAT TAAAAAAATA TATTCATTAT
TGTTATTAAC AAAAATTTAG TTTAGGATTA ATTTTTTTAT ATAAGTAATA

      2060        2070        2080        2090        2100
        *           *           *           *           *
GACTTTCATG TTTTTAATGT AATTTATTCC TATATCTATA ATGATTTTTG
CTGAAAGTAC AAAAATTACA TTAAATAAGG ATATAGATAT TACTAAAAAC

      2110        2120        2130        2140        2150
        *           *           *           *           *
TTGTGAAGAG CGTTTTCATT TGCTATAGAA CAAGGAGAAT AGTTCCAGGA
AACACTTCTC GCAAAAGTAA ACGATATCTT GTTCCTCTTA TCAAGGTCCT
```

Fig. 4-4

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      2160        2170        2180        2190        2200
         *           *           *           *           *
AATATTCGAC TTGATTTAAT TATAGTGTAA ACATGCTGAA CACTGAAAAT
TTATAAGCTG AACTAAATTA ATATCACATT TGTACGACTT GTGACTTTTA

      2210        2220        2230        2240        2250
         *           *           *           *           *
TACTTTTTCA ATAAACGAAA AATATAATAT ACATTACAAA ACTTATGTGA
ATGAAAAAGT TATTTGCTTT TTATATTATA TGTAATGTTT TGAATACACT

      2260        2270        2280        2290        2300
         *           *           *           *           *
ATAAAGCATG AGACTTAATA TACGTTCCCT TTATCATTTT ACTTCAAAGA
TATTTCGTAC TCTGAATTAT ATGCAAGGGA AATAGTAAAA TGAAGTTTCT

      2310        2320        2330        2340        2350
         *           *           *           *           *
AAATAAACAG AAATGTAACT TTCACATGTA AATCTAATTC TTAAATTTAA
TTTATTTGTC TTTACATTGA AAGTGTACAT TTAGATTAAG AATTTAAATT

      2360        2370        2380        2390        2400
         *           *           *           *           *
AAAATAATAT TTATATATTT ATATGAAAAT AACGAACCGG ATGAAAAATA
TTTTATTATA AATATATAAA TATACTTTTA TTGCTTGGCC TACTTTTTAT

      2410        2420        2430        2440        2450
         *           *           *           *           *
AATTTTATAT ATTTATATCA TCTCCAAATC TAGTTTGGTT CAGGGGCTTA
TTAAAATATA TAAATATAGT AGAGGTTTAG ATCAAACCAA GTCCCCGAAT

      2460        2470        2480        2490        2500
         *           *           *           *           *
CCGAACCGGA TTGAACTTCT CATATACAAA AATTAGCAAC ACAAAATGTC
GGCTTGGCCT AACTTGAAGA GTATATGTTT TTAATCGTTG TGTTTTACAG

      2510        2520        2530        2540        2550
         *           *           *           *           *
TCCGGTATAA ATACTAACAT TTATAACCCG AACCGGTTTA GCTTCCTGTT
AGGCCATATT TATGATTGTA AATATTGGGC TTGGCCAAAT CGAAGGACAA

      2560        2570        2580        2590        2600
         *           *           *           *           *
ATATCTTTTT AAAAAAGATC TCTGACAAAG ATTCCTTTCC TGGAAATTTA
TATAGAAAAA TTTTTTCTAG AGACTGTTTC TAAGGAAAGG ACCTTTAAAT

      2610        2620        2630        2640        2650
         *           *           *           *           *
CCGGTTTTGG TGAAATGTAA ACCGTGGGAC GAGGATGCTT CTTCATATCT
GGCCAAAACC ACTTTACATT TGGCACCCTG CTCCTACGAA GAAGTATAGA

      2660        2670        2680        2690        2700
         *           *           *           *           *
CACCACCACT CTCGTTGACT GGACTTGGCT CTGCTCGTCA ATGGTTATCT
GTGGTGGTGA GAGCAACTGA CCTGAACCGA GACGAGCAGT TACCAATAGA
```

Fig. 4-5

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2710        2720        2730        2740        2750
*           *           *           *           *
TCGATCTTAA ACCAAATCCA GTTGATAAGG TCTCTTCGTT GATTAGCAGA
AGCTAGAATT TGGTTTAGGT CAACTATTCC AGAGAAGCAA CTAATCGTCT

2760        2770        2780        2790        2800
*           *           *           *           *
GATCTCTTTA ATTTGTGAAT TTCAATTCAT CGGAACCTGT TGATGGACAC
CTAGAGAAAT TAAACACTTA AAGTTAAGTA GCCTTGGACA ACTACCTGTG

2810        2820        2830        2840        2850
*           *           *           *           *
CACCATTGAT GGATTCGCCG ATTCTTATGA AATCAGCAGC ACTAGTTTCG
GTGGTAACTA CCTAAGCGGC TAAGAATACT TTAGTCGTCG TGATCAAAGC

2860        2870        2880        2890        2900
*           *           *           *           *
TCGCTACCGA TAACACCGAC TCCTCTATTG TTTATCTGGC CGCCGAACAA
AGCGATGGCT ATTGTGGCTG AGGAGATAAC AAATAGACCG GCGGCTTGTT

2910        2920        2930        2940        2950
*           *           *           *           *
GTACTCACCG GACCTGATGT ATCTGCTCTG CAATTGCTCT CCAACAGCTT
CATGAGTGGC CTGGACTACA TAGACGAGAC GTTAACGAGA GGTTGTCGAA

2960        2970        2980        2990        3000
*           *           *           *           *
CGAATCCGTC TTTGACTCGC CGGATGATTT CTACAGCGAC GCTAAGCTTG
GCTTAGGCAG AAACTGAGCG GCCTACTAAA GATGTCGCTG CGATTCGAAC

3010        3020        3030        3040        3050
*           *           *           *           *
TTCTCTCCGA CGGCCGGGAA GTTTCTTTCC ACCGGTGCGT TTTGTCAGCG
AAGAGAGGCT GCCGGCCCTT CAAAGAAAGG TGGCCACGCA AAACAGTCGC

3060        3070        3080        3090        3100
*           *           *           *           *
AGAAGCTCTT TCTTCAAGAG CGCTTTAGCC GCCGCTAAGA AGGAGAAAGA
TCTTCGAGAA AGAAGTTCTC GCGAAATCGG CGGCGATTCT TCCTCTTTCT

3110        3120        3130        3140        3150
*           *           *           *           *
CTCCAACAAC ACCGCCGCCG TGAAGCTCGA GCTTAAGGAG ATTGCCAAGG
GAGGTTGTTG TGGCGGCGGC ACTTCGAGCT CGAATTCCTC TAACGGTTCC

3160        3170        3180        3190        3200
*           *           *           *           *
ATTACGAAGT CGGTTTCGAT TCGGTTGTGA CTGTTTTGGC TTATGTTTAC
TAATGCTTCA GCCAAAGCTA AGCCAACACT GACAAAACCG AATACAAATG

3210        3220        3230        3240        3250
*           *           *           *           *
AGCAGCAGAG TGAGACCGCC GCCTAAAGGA GTTTCTGAAT GCGCAGACGA
TCGTCGTCTC ACTCTGGCGG CGGATTTCCT CAAAGACTTA CGCGTCTGCT
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Fig. 4-6

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      3260       3270       3280       3290       3300
         *          *          *          *          *
GAATTGCTGC CACGTGGCTT GCCGGCCGGC GGTGGATTTC ATGTTGGAGG
CTTAACGACG GTGCACCGAA CGGCCGGCCG CCACCTAAAG TACAACCTCC

      3310       3320       3330       3340       3350
         *          *          *          *          *
TTCTCTATTT GGCTTTCATC TTCAAGATCC CTGAATTAAT TACTCTCTAT
AAGAGATAAA CCGAAAGTAG AAGTTCTAGG GACTTAATTA ATGAGAGATA

      3360       3370       3380       3390       3400
         *          *          *          *          *
CAGGTAAAAC ACCATCTGCA TTAAGCTATG GTTACACATT CATGAATATG
GTCCATTTTG TGGTAGACGT AATTCGATAC CAATGTGTAA GTACTTATAC

      3410       3420       3430       3440       3450
         *          *          *          *          *
TTCTTACTTG AGTACTTGTA TTTGTATTTC AGAGGCACTT ATTGGACGTT
AAGAATGAAC TCATGAACAT AAACATAAAG TCTCCGTGAA TAACCTGCAA

      3460       3470       3480       3490       3500
         *          *          *          *          *
GTAGACAAAG TTGTTATAGA GGACACATTG GTTATACTCA AGCTTGCTAA
CATCTGTTTC AACAATATCT CCTGTGTAAC CAATATGAGT TCGAACGATT

      3510       3520       3530       3540       3550
         *          *          *          *          *
TATATGTGGT AAAGCTTGTA TGAAGCTATT GGATAGATGT AAAGAGATTA
ATATACACCA TTTCGAACAT ACTTCGATAA CCTATCTACA TTTCTCTAAT

      3560       3570       3580       3590       3600
         *          *          *          *          *
TTGTCAAGTC TAATGTAGAT ATGGTTAGTC TTGAAAAGTC ATTGCCGGAA
AACAGTTCAG ATTACATCTA TACCAATCAG AACTTTTCAG TAACGGCCTT

      3610       3620       3630       3640       3650
         *          *          *          *          *
GAGCTTGTTA AAGAGATAAT TGATAGACGT AAAGAGCTTG GTTTGGAGGT
CTCGAACAAT TTCTCTATTA ACTATCTGCA TTTCTCGAAC CAAACCTCCA

      3660       3670       3680       3690       3700
         *          *          *          *          *
ACCTAAAGTA AAGAAACATG TCTCGAATGT ACATAAGGCA CTTGACTCGG
TGGATTTCAT TTCTTTGTAC AGAGCTTACA TGTATTCCGT GAACTGAGCC

      3710       3720       3730       3740       3750
         *          *          *          *          *
ATGATATTGA GTTAGTCAAG TTGCTTTTGA AAGAGGATCA CACCAATCTA
TACTATAACT CAATCAGTTC AACGAAAACT TTCTCCTAGT GTGGTTAGAT

      3760       3770       3780       3790       3800
         *          *          *          *          *
GATGATGCGT GTGCTCTTCA TTTCGCTGTT GCATATTGCA ATGTGAAGAC
CTACTACGCA CACGAGAAGT AAAGCGACAA CGTATAACGT TACACTTCTG
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Fig. 4-7

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      3810        3820        3830        3840        3850
        *           *           *           *           *
CGCAACAGAT CTTTTAAAAC TTGATCTTGC CGATGTCAAC CATAGGAATC
GCGTTGTCTA GAAAATTTTG AACTAGAACG GCTACAGTTG GTATCCTTAG

      3860        3870        3880        3890        3900
        *           *           *           *           *
CGAGGGGATA TACGGTGCTT CATGTTGCTG CGATGCGGAA GGAGCCACAA
GCTCCCCTAT ATGCCACGAA GTACAACGAC GCTACGCCTT CCTCGGTGTT

      3910        3920        3930        3940        3950
        *           *           *           *           *
TTGATACTAT CTCTATTGGA AAAAGGTGCA AGTGCATCAG AAGCAACTTT
AACTATGATA GAGATAACCT TTTTCCACGT TCACGTAGTC TTCGTTGAAA

      3960        3970        3980        3990        4000
        *           *           *           *           *
GGAAGGTAGA ACCGCACTCA TGATCGCAAA ACAAGCCACT ATGGCGGTTG
CCTTCCATCT TGGCGTGAGT ACTAGCGTTT TGTTCGGTGA TACCGCCAAC

      4010        4020        4030        4040        4050
        *           *           *           *           *
AATGTAATAA TATCCCGGAG CAATGCAAGC ATTCTCTCAA AGGCCGACTA
TTACATTATT ATAGGGCCTC GTTACGTTCG TAAGAGAGTT TCCGGCTGAT

      4060        4070        4080        4090        4100
        *           *           *           *           *
TGTGTAGAAA TACTAGAGCA AGAAGACAAA CGAGAACAAA TTCCTAGAGA
ACACATCTTT ATGATCTCGT TCTTCTGTTT GCTCTTGTTT AAGGATCTCT

      4110        4120        4130        4140        4150
        *           *           *           *           *
TGTTCCTCCC TCTTTTGCAG TGGCGGCCGA TGAATTGAAG ATGACGCTGC
ACAAGGAGGG AGAAAACGTC ACCGCCGGCT ACTTAACTTC TACTGCGACG

      4160        4170        4180        4190        4200
        *           *           *           *           *
TCGATCTTGA AAATAGAGGT ATCTATCAAG TCTTATTTCT TATATGTTTG
AGCTAGAACT TTTATCTCCA TAGATAGTTC AGAATAAAGA ATATACAAAC

      4210        4220        4230        4240        4250
        *           *           *           *           *
AATTAAATTT ATGTCCTCTC TATTAGGAAA CTGAGTGAAC TAATGATAAC
TTAATTTAAA TACAGGAGAG ATAATCCTTT GACTCACTTG ATTACTATTG

      4260        4270        4280        4290        4300
        *           *           *           *           *
TATTCTTTGT GTCGTCCACT GTTTAGTTGC ACTTGCTCAA CGTCTTTTTC
ATAAGAAACA CAGCAGGTGA CAAATCAACG TGAACGAGTT GCAGAAAAAG

      4310        4320        4330        4340        4350
        *           *           *           *           *
CAACGGAAGC ACAAGCTGCA ATGGAGATCG CCGAAATGAA GGGAACATGT
GTTGCCTTCG TGTTCGACGT TACCTCTAGC GGCTTTACTT CCCTTGTACA
```

Fig. 4-8

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      4360        4370        4380        4390        4400
         *           *           *           *           *
GAGTTCATAG TGACTAGCCT CGAGCCTGAC CGTCTCACTG GTACGAAGAG
CTCAAGTATC ACTGATCGGA GCTCGGACTG GCAGAGTGAC CATGCTTCTC

      4410        4420        4430        4440        4450
         *           *           *           *           *
AACATCACCG GGTGTAAAGA TAGCACCTTT CAGAATCCTA GAAGAGCATC
TTGTAGTGGC CCACATTTCT ATCGTGGAAA GTCTTAGGAT CTTCTCGTAG

      4460        4470        4480        4490        4500
         *           *           *           *           *
AAAGTAGACT AAAAGCGCTT TCTAAAACCG GTATGGATTC TCACCCACTT
TTTCATCTGA TTTTCGCGAA AGATTTTGGC CATACCTAAG AGTGGGTGAA

      4510        4520        4530        4540        4550
         *           *           *           *           *
CATCGGACTC CTTATCACAA AAAACAAAAC TAAATGATCT TTAAACATGG
GTAGCCTGAG GAATAGTGTT TTTTGTTTTG ATTTACTAGA AATTTGTACC

      4560        4570        4580        4590        4600
         *           *           *           *           *
TTTTGTTACT TGCTGTCTGA CCTTGTTTTT TTATCATCAG TGGAACTCGG
AAAACAATGA ACGACAGACT GGAACAAAAA AATAGTAGTC ACCTTGAGCC

      4610        4620        4630        4640        4650
         *           *           *           *           *
GAAACGATTC TTCCCGCGCT GTTCGGCAGT GCTCGACCAG ATTATGAACT
CTTTGCTAAG AAGGGCGCGA CAAGCCGTCA CGAGCTGGTC TAATACTTGA

      4660        4670        4680        4690        4700
         *           *           *           *           *
GTGAGGACTT GACTCAACTG GCTTGCGGAG AAGACGACAC TGCTGAAGAA
CACTCCTGAA CTGAGTTGAC CGAACGCCTC TTCTGCTGTG ACGACTTCTT

      4710        4720        4730        4740        4750
         *           *           *           *           *
ACGACTACAA AAGAAGCAAA GGTACATGGA AATACAAGAG ACACTAAAGA
TGCTGATGTT TTCTTCGTTT CCATGTACCT TTATGTTCTC TGTGATTTCT

      4760        4770        4780        4790        4800
         *           *           *           *           *
AGGCCTTTAG TGAGGACAAT TTGGAATTAG GAAATTCGTC CCTGACAGAT
TCCGGAAATC ACTCCTGTTA AACCTTAATC CTTTAAGCAG GGACTGTCTA

      4810        4820        4830        4840        4850
         *           *           *           *           *
TCGACTTCTT CCACATCGAA ATCAACCGGT GGAAAGAGGT CTAACCGTAA
AGCTGAAGAA GGTGTAGCTT TAGTTGGCCA CCTTTCTCCA GATTGGCATT
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Fig. 4-9

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      4860       4870       4880       4890       4900
         *          *          *          *          *
ACTCTCTCAT CGTCGTCGGT GAGACTCTTG CCTCTTAGTG TAATTTTTGC
TGAGAGAGTA GCAGCAGCCA CTCTGAGAAC GGAGAATCAC ATTAAAAACG

      4910       4920       4930       4940       4950
         *          *          *          *          *
TGTACCATAT AATTCTGTTT TCATGATGAC TGTAACTGTT TATGTCTATC
ACATGGTATA TTAAGACAAA AGTACTACTG ACATTGACAA ATACAGATAG

      4960       4970       4980       4990       5000
         *          *          *          *          *
GTTGGCGTCA TATAGTTTCG CTCTTCGTTT TGCATCCTGT GTATTATTGC
CAACCGCAGT ATATCAAAGC GAGAAGCAAA ACGTAGGACA CATAATAACG

      5010       5020       5030       5040       5050
         *          *          *          *          *
TGCAGGTGTG CTTCAAACAA ATGTTGTAAC AATTTGAACC AATGGTATAC
ACGTCCACAC GAAGTTTGTT TACAACATTG TTAAACTTGG TTACCATATG

      5060       5070       5080       5090       5100
         *          *          *          *          *
AGATTTGTAA TATATATTTA TGTACATCAA CAATAACCCA TGATGGTGTT
TCTAAACATT ATATATAAAT ACATGTAGTT GTTATTGGGT ACTACCACAA

      5110       5120       5130       5140       5150
         *          *          *          *          *
ACAGAGTTGC TAGAATCAAA GTGTGAAATA ATGTCAAATT GTTCATCTGT
TGTCTCAACG ATCTTAGTTT CACACTTTAT TACAGTTTAA CAAGTAGACA

      5160       5170       5180       5190       5200
         *          *          *          *          *
TGGATATTTT CCACCAAGAA CCAAAAGAAT ATTCAAGTTC CCTGAACTTC
ACCTATAAAA GGTGGTTCTT GGTTTTCTTA TAAGTTCAAG GGACTTGAAG

      5210       5220       5230       5240       5250
         *          *          *          *          *
TGGCAACATT CATGTTATAT GTATCTTCCT AATTCTTCCT TTAACCTTTT
ACCGTTGTAA GTACAATATA CATAGAAGGA TTAAGAAGGA AATTGGAAAA

      5260       5270       5280       5290       5300
         *          *          *          *          *
GTAACTCGAA TTACACAGCA AGTTAGTTTC AGGTCTAGAG ATAAGAGAAC
CATTGAGCTT AATGTGTCGT TCAATCAAAG TCCAGATCTC TATTCTCTTG

      5310       5320       5330       5340       5350
         *          *          *          *          *
ACTGAGTGGG CGTGTAAGGT GCATTCTCCT AGTCAGCTCC ATTGCATCCA
TGACTCACCC GCACATTCCA CGTAAGAGGA TCAGTCGAGG TAACGTAGGT

      5360       5370       5380       5390       5400
         *          *          *          *          *
ACATTTGTGA ATGACACAAG TTAACAATCC TTTGCACCAT TTCTGGGTGC
TGTAAACACT TACTGTGTTC AATTGTTAGG AAACGTGGTA AAGACCCACG
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Fig. 4-10

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          5410        5420        5430        5440        5450
            *           *           *           *           *
ATACATGGAA ACTTCTTCGA TTGAAACTTC CCACATGTGC AGGTGCGTTC
TATGTACCTT TGAAGAAGCT AACTTTGAAG GGTGTACACG TCCACGCAAG

          5460        5470        5480        5490        5500
            *           *           *           *           *
GCTGTCACTG ATAGACCAAG AGACTGAAAG CTTTCACAAA TTGCCCTCAA
CGACAGTGAC TATCTGGTTC TCTGACTTTC GAAAGTGTTT AACGGGAGTT

          5510        5520        5530        5540        5550
            *           *           *           *           *
ATCTTCTGTT TCTATCGTCA TGACTCCATA TCTCCGACCA CTGGTCATGA
TAGAAGACAA AGATAGCAGT ACTGAGGTAT AGAGGCTGGT GACCAGTACT

          5560        5570        5580        5590        5600
            *           *           *           *           *
GCCAGAGCCC ACTGATTTTG AGGGAATTGG GCTAACCATT TCCGAGCTTC
CGGTCTCGGG TGACTAAAAC TCCCTTAACC CGATTGGTAA AGGCTCGAAG

          5610        5620        5630        5640        5650
            *           *           *           *           *
TGAGTCCTTC TTTTTGATGT CCTTTATGTA GGAATCAAAT TCTTCCTTCT
ACTCAGGAAG AAAAACTACA GGAAATACAT CCTTAGTTTA AGAAGGAAGA

          5660        5670        5680        5690        5700
            *           *           *           *           *
GACTTGTGGA TCCAGCCTGC TTCACAAGGC TCACCAGGTT GTAGTCTCCA
CTGAACACCT AGGTCGGACG AAGTGTTCCG AGTGGTCCAA CATCAGAGGT

          5710        5720        5730        5740        5750
            *           *           *           *           *
AAAATATCAT GGAATTGTAA GCAAAAACAA TCCAGACAGA ACCTGTGATA
TTTTATAGTA CCTTAACATT CGTTTTTGTT AGGTCTGTCT TGGACACTAT

          5760        5770        5780        5790        5800
            *           *           *           *           *
GACCCAAGGT TCTTGCCACA GTGATCCGGG TTCGTTAATA ACAGCAACTA
CTGGGTTCCA AGAACGGTGT CACTAGGCCC AAGCAATTAT TGTCGTTGAT

          5810        5820        5830        5840        5850
            *           *           *           *           *
TGTCCGGGTG AGGACTGGAG ACGAAGCAAA CGTCTTTCCT TTGTGTTACC
ACAGGCCCAC TCCTGACCTC TGCTTCGTTT GCAGAAAGGA AACACAATGG

          5860        5870        5880        5890        5900
            *           *           *           *           *
TTCTCTCTGA TATTAGTGAG AAACCAACGC CAACTATCAG TGGACACTTC
AAGAGAGACT ATAATCACTC TTTGGTTGCG GTTGATAGTC ACCTGTGAAG

          5910        5920        5930        5940        5950
            *           *           *           *           *
TTTGGTAAGC GGAAAGCAAG CGGGAAAAAC AATCATCAGC GTCGAGTCCT
AAACCATTCG CCTTTCGTTC GCCCTTTTTG TTAGTAGTCG CAGCTCAGGA
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Fig. 4-11

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      5960        5970        5980        5990        6000
        *           *           *           *           *
GAGGAAAATC ATCAATTTCA TAGGGGTACT TGCCGTTCAA GTCTTTTGAA
CTCCTTTTAG TAGTTAAAGT ATCCCCATGA ACGGCAAGTT CAGAAAACTT

      6010        6020        6030        6040        6050
        *           *           *           *           *
TCCACTATGA TCAGAGGTCT ACAGTGTTGA AACCCTTCAA TGGACTGTGG
AGGTGATACT AGTCTCCAGA TGTCACAACT TTGGGAAGTT ACCTGACACC

      6060        6070        6080        6090        6100
        *           *           *           *           *
AAACGCCCAA AACGCGCCAC CGAAGGATGC AAATTCAGGA TTAGGGAAAA
TTTGCGGGTT TTGCGCGGTG GCTTCCTACG TTTAAGTCCT AATCCCTTTT

      6110        6120        6130        6140        6150
        *           *           *           *           *
GCTCATATTG CAGTCCACAA GTAGCCCATT AGATGAGTGA AATGCAGCCA
CGAGTATAAC GTCAGGTGTT CATCGGGTAA TCTACTCACT TTACGTCGGT

      6160        6170        6180        6190        6200
        *           *           *           *           *
ATTAGTTTAG GCAATACTCT GAAACTCTGA TCTTTGATTA CTTCCTGTTC
TAATCAAATC CGTTATGAGA CTTTGAGACT AGAAACTAAT GAAGGACAAG

      6210        6220        6230        6240        6250
        *           *           *           *           *
TGCTGCCCGC AGCTTTGAAG TTTTAAGCAT GTCACCAAAC TTTTCAACTC
ACGACGGGCG TCGAAACTTC AAAATTCGTA CAGTGGTTTG AAAAGTTGAG

      6260        6270        6280        6290        6300
        *           *           *           *           *
TGCTGTTAGA GTGGGTTGTA CCCTGATCAG ACACTCAATC TCTTCTGCTG
ACGACAATCT CACCCAACAT GGGACTAGTC TGTGAGTTAG AGAAGACGAC

      6310        6320        6330        6340        6350
        *           *           *           *           *
CAAATTACAA GTTGAAGTTT TCCGGCTTAA TAGAACAACA AGTATGTGGA
GTTTAATGTT CAACTTCAAA AGGCCGAATT ATCTTGTTGT TCATACACCT

      6360        6370        6380        6390        6400
        *           *           *           *           *
CCAACTACAC TTAGTTATCT TAACAAGTCC ATGTTCTTCT ATTCAATCTG
GGTTGATGTG AATCAATAGA ATTGTTCAGG TACAAGAAGA TAAGTTAGAC

      6410        6420        6430        6440        6450
        *           *           *           *           *
CCCGACGCGA CCAATTGCAT TTCCATCTGA TGCATTTAAA CGTATACTCG
GGGCTGCGCT GGTTAACGTA AAGGTAGACT ACGTAAATTT GCATATGAGC

      6460        6470        6480        6490        6500
        *           *           *           *           *
TCCTTCTCAA TCTCTTGTAC TACACACTTT TGCTGCCCTC TAATGGAACA
AGGAAGAGTT AGAGAACATG ATGTGTGAAA ACGACGGGAG ATTACCTTGT
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Fig. 4-12

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      6510        6520        6530        6540        6550
        *           *           *           *           *
CCAGTCCACC GCCTTCTTCA GCTCATCCCT ATCTTTAAAA CACAACCCTA
GGTCAGGTGG CGGAAGAAGT CGAGTAGGGA TAGAAATTTT GTGTTGGGAT

      6560        6570        6580        6590        6600
        *           *           *           *           *
CACGCAATTC ATGATCATCA ATCCACAAAC TAGACAAAGT ACACTGTTTT
GTGCGTTAAG TACTAGTAGT TAGGTGTTTG ATCTGTTTCA TGTGACAAAA

      6610        6620        6630        6640        6650
        *           *           *           *           *
GAAGCACTCG AATCAACAAC ACCTTTACTT AATAAGCACG CATACGGTAA
CTTCGTGAGC TTAGTTGTTG TGGAAATGAA TTATTCGTGC GTATGCCATT

      6660        6670        6680        6690        6700
        *           *           *           *           *
TACCTCTAAG CCTGGCACAT TCAAACCTTG TGTGCATCAT CTGAACCCGA
ATGGAGATTC GGACCGTGTA AGTTTGGAAC ACACGTAGTA GACTTGGGCT

      6710        6720        6730        6740        6750
        *           *           *           *           *
GTTTTTATCC GTTATTTCTC CATCCCCACC TCCACGAGTG CTACCATTTC
CAAAAATAGG CAATAAAGAG GTAGGGGTGG AGGTGCTCAC GATGGTAAAG

      6760        6770        6780        6790        6800
        *           *           *           *           *
CGAAGTCAGA ATTTTCCTCG TCTTCAATCC ACCCGTTACT GTTACCCACT
GCTTCAGTCT TAAAAGGAGC AGAAGTTAGG TGGGCAATGA CAATGGGTGA

      6810        6820        6830        6840        6850
        *           *           *           *           *
CCCTGAACCT CTAAACCATT ATCTCTCTCT ACTTTCACAG ATGCATGTGA
GGGACTTGGA GATTTGGTAA TAGAGAGAGA TGAAAGTGTC TACGTACACT

      6860        6870        6880        6890        6900
        *           *           *           *           *
CACATAATCA GTAGCTTCTT GGGGTTGTTG CGTCCTCTGT GTATTCGAGG
GTGTATTAGT CATCGAAGAA CCCCAACAAC GCAGGAGACA CATAAGCTCC

      6910        6920        6930        6940        6950
        *           *           *           *           *
AACTAGCGGG ATATTCTATT ACGGATGAAC AAGCAGCATG ATCAGTAACA
TTGATCGCCC TATAAGATAA TGCCTACTTG TTCGTCGTAC TAGTCATTGT

      6960        6970        6980        6990        7000
        *           *           *           *           *
TTATCAGATG TCGATTTCAC TTCCAAATAC AACTCCACAT TTCTTATAGA
AATAGTCTAC AGCTAAAGTG AAGGTTTATG TTGAGGTGTA AAGAATATCT

      7010        7020        7030        7040        7050
        *           *           *           *           *
AGGATGATAA CTTGGAACTT CAAGCATAGT CTCCAAACTA GTGTCGTTCA
TCCTACTATT GAACCTTGAA GTTCGTATCA GAGGTTTGAT CACAGCAAGT
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Fig. 4-13

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      7060        7070        7080        7090        7100
        *           *           *           *           *
CTACATGAAG AAGTAGATAG ATAAAGAGAT CCGGTGAAAC AACTACAGGA
GATGTACTTC TTCATCTATC TATTTCTCTA GGCCACTTTG TTGATGTCCT

      7110        7120        7130        7140        7150
        *           *           *           *           *
TACTTACCAA AATATATTGA ACACTGATTT CTGCAGCTGC AATCCAAAAA
ATGAATGGTT TTATATAACT TGTGACTAAA GACGTCGACG TTAGGTTTTT

      7160        7170        7180        7190        7200
        *           *           *           *           *
TTGGATAAAG ACCATTCAAC AATGTACTTA ACGCAGTCTT TTGCCTAACC
AACCTATTTC TGGTAAGTTG TTACATGAAT TGCGTCAGAA AACGGATTGG

      7210        7220        7230        7240        7250
        *           *           *           *           *
TTGACCGTTT TAGGAGTGGA TCCTTCATAG TAAACACCAT CAGGACCATA
AACTGGCAAA ATCCTCACCT AGGAAGTATC ATTTGTGGTA GTCCTGGTAT

      7260        7270        7280        7290        7300
        *           *           *           *           *
CTTGGTAGAA CCTTTCTCTC AAGGTTTCCA TCGCCATGAC CATAACAGTC
GAACCATCTT GGAAAGAGAG TTCCAAAGGT AGCGGTACTG GTATTGTCAG

      7310        7320        7330        7340        7350
        *           *           *           *           *
CTGCAGTGAA TTCTAAGAAA AATGTAAAAA ATTTTGGCCT AAACTCATAA
GACGTCACTT AAGATTCTTT TTACATTTTT TAAAACCGGA TTTGAGTATT

      7360        7370        7380        7390        7400
        *           *           *           *           *
TTCTTAACAT ACGAAACCAT GGAGAACTCC ATGTCTAAAA AATAAAGGCT
AAGAATTGTA TGCTTTGGTA CCTCTTGAGG TACAGATTTT TTATTTCCGA

      7410        7420        7430        7440        7450
        *           *           *           *           *
AAAGCTTTTT GGCGACAGAA GCAGATAAAT CCATTCAAAA CACATAAACT
TTTCGAAAAA CCGCTGTCTT CGTCTATTTA GGTAAGTTTT GTGTATTTGA

      7460        7470        7480        7490        7500
        *           *           *           *           *
CTAAACAATA AACAGTGATA CTCAATACTA AGACTTGTAA AGGTCTACGT
GATTTGTTAT TTGTCACTAT GAGTTATGAT TCTGAACATT TCCAGATGCA

      7510        7520        7530        7540
        *           *           *           *
AACTCAAAAC TGGAGAATTG TCAGATCGGG TGTGGCTAGT AGAAGCTT
TTGAGTTTTG ACCTCTTAAC AGTCTAGCCC ACACCGATCA TCTTCGAA
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Fig. 4-14

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          10          20          30          40          50
           *           *           *           *           *
TCGATCTTTA ACCAAATCCA GTTGATAAGG TCTCTTCGTT GATTAGCAGA
AGCTAGAAAT TGGTTTAGGT CAACTATTCC AGAGAAGCAA CTAATCGTCT

          60          70          80          90         100
           *           *           *           *           *
GATCTCTTTA ATTTGTGAAT TTCAATTCAT CGGAACCTGT TGATGGACAC
CTAGAGAAAT TAAACACTTA AAGTTAAGTA GCCTTGGACA ACTACCTGTG
                                                M  D  T>

         110         120         130         140         150
           *           *           *           *           *
CACCATTGAT GGATTCGCCG ATTCTTATGA AATCAGCAGC ACTAGTTTCG
GTGGTAACTA CCTAAGCGGC TAAGAATACT TTAGTCGTCG TGATCAAAGC
  T  I  D   G  F  A   D  S  Y  E   I  S  S   T  S  F>

         160         170         180         190         200
           *           *           *           *           *
TCGCTACCGA TAACACCGAC TCCTCTATTG TTTATCTGGC CGCCGAACAA
AGCGATGGCT ATTGTGGCTG AGGAGATAAC AAATAGACCG GCGGCTTGTT
V  A  T  D   N  T  D   S  S  I   V  Y  L  A   A  E  Q>

         210         220         230         240         250
           *           *           *           *           *
GTACTCACCG GACCTGATGT ATCTGCTCTG CAATTGCTCT CCAACAGCTT
CATGAGTGGC CTGGACTACA TAGACGAGAC GTTAACGAGA GGTTGTCGAA
 V  L  T   G  P  D  V   S  A  L   Q  L  L   S  N  S  F>

         260         270         280         290         300
           *           *           *           *           *
CGAATCCGTC TTTGACTCGC CGGATGATTT CTACAGCGAC GCTAAGCTTG
GCTTAGGCAG AAACTGAGCG GCCTACTAAA GATGTCGCTG CGATTCGAAC
  E  S  V   F  D  S   P  D  D  F   Y  S  D   A  K  L>

         310         320         330         340         350
           *           *           *           *           *
TTCTCTCCGA CGGCCGGGAA GTTTCTTTCC ACCGGTGCGT TTTGTCAGCG
AAGAGAGGCT GCCGGCCCTT CAAAGAAAGG TGGCCACGCA AAACAGTCGC
V  L  S  D   G  R  E   V  S  F   H  R  C  V   L  S  A>

         360         370         380         390         400
           *           *           *           *           *
AGAAGCTCTT TCTTCAAGAG CGCTTTAGCC GCCGCTAAGA AGGAGAAAGA
TCTTCGAGAA AGAAGTTCTC GCGAAATCGG CGGCGATTCT TCCTCTTTCT
 R  S  S   F  F  K  S   A  L  A   A  A  K   K  E  K  D>

         410         420         430         440         450
           *           *           *           *           *
CTCCAACAAC ACCGCCGCCG TGAAGCTCGA GCTTAAGGAG ATTGCCAAGG
GAGGTTGTTG TGGCGGCGGC ACTTCGAGCT CGAATTCCTC TAACGGTTCC
  S  N  N   T  A  A   V  K  L  E   L  K  E   I  A  K>
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Fig. 5-1

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        460         470         480         490         500
          *           *           *           *           *
ATTACGAAGT CGGTTTCGAT TCGGTTGTGA CTGTTTTGGC TTATGTTTAC
TAATGCTTCA GCCAAAGCTA AGCCAACACT GACAAAACCG AATACAAATG
D  Y  E  V   G  F  D   S  V  V   T  V  L  A   Y  V  Y>

        510         520         530         540         550
          *           *           *           *           *
AGCAGCAGAG TGAGACCGCC GCCTAAAGGA GTTTCTGAAT GCGCAGACGA
TCGTCGTCTC ACTCTGGCGG CGGATTTCCT CAAAGACTTA CGCGTCTGCT
 S  S  R   V  R  P  P   P  K  G   V  S  E   C  A  D  E>

        560         570         580         590         600
          *           *           *           *           *
GAATTGCTGC CACGTGGCTT GCCGGCCGGC GGTGGATTTC ATGTTGGAGG
CTTAACGACG GTGCACCGAA CGGCCGGCCG CCACCTAAAG TACAACCTCC
  N  C  C   H  V  A   C  R  P  A   V  D  F   M  L  E>

        610         620         630         640         650
          *           *           *           *           *
TTCTCTATTT GGCTTTCATC TTCAAGATCC CTGAATTAAT TACTCTCTAT
AAGAGATAAA CCGAAAGTAG AAGTTCTAGG GACTTAATTA ATGAGAGATA
V  L  Y  L   A  F  I   F  K  I   P  E  L  I   T  L  Y>

        660         670         680         690         700
          *           *           *           *           *
CAGAGGCACT TATTGGACGT TGTAGACAAA GTTGTTATAG AGGACACATT
GTCTCCGTGA ATAACCTGCA ACATCTGTTT CAACAATATC TCCTGTGTAA
 Q  R  H   L  L  D  V   V  D  K   V  V  I   E  D  T  L>

        710         720         730         740         750
          *           *           *           *           *
GGTTATACTC AAGCTTGCTA ATATATGTGG TAAAGCTTGT ATGAAGCTAT
CCAATATGAG TTCGAACGAT TATATACACC ATTTCGAACA TACTTCGATA
  V  I  L   K  L  A   N  I  C  G   K  A  C   M  K  L>

        760         770         780         790         800
          *           *           *           *           *
TGGATAGATG TAAAGAGATT ATTGTCAAGT CTAATGTAGA TATGGTTAGT
ACCTATCTAC ATTTCTCTAA TAACAGTTCA GATTACATCT ATACCAATCA
L  D  R  C   K  E  I   I  V  K   S  N  V  D   M  V  S>

        810         820         830         840         850
          *           *           *           *           *
CTTGAAAAGT CATTGCCGGA AGAGCTTGTT AAAGAGATAA TTGATAGACG
GAACTTTTCA GTAACGGCCT TCTCGAACAA TTTCTCTATT AACTATCTGC
 L  E  K   S  L  P  E   E  L  V   K  E  I   I  D  R  R>

        860         870         880         890         900
          *           *           *           *           *
TAAAGAGCTT GGTTTGGAGG TACCTAAAGT AAAGAAACAT GTCTCGAATG
ATTTCTCGAA CCAAACCTCC ATGGATTTCA TTTCTTTGTA CAGAGCTTAC
  K  E  L   G  L  E   V  P  K  V   K  K  H   V  S  N>
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Fig. 5-2

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          910         920         930         940         950
            *           *           *           *           *
TACATAAGGC ACTTGACTCG GATGATATTG AGTTAGTCAA GTTGCTTTTG
ATGTATTCCG TGAACTGAGC CTACTATAAC TCAATCAGTT CAACGAAAAC
V  H  K  A   L  D  S   D  D  I   E  L  V  K   L  L  L>

          960         970         980         990        1000
            *           *           *           *           *
AAAGAGGATC ACACCAATCT AGATGATGCG TGTGCTCTTC ATTTCGCTGT
TTTCTCCTAG TGTGGTTAGA TCTACTACGC ACACGAGAAG TAAAGCGACA
 K  E  D   H  T  N  L   D  D  A   C  A  L   H  F  A  V>

         1010        1020        1030        1040        1050
            *           *           *           *           *
TGCATATTGC AATGTGAAGA CCGCAACAGA TCTTTTAAAA CTTGATCTTG
ACGTATAACG TTACACTTCT GGCGTTGTCT AGAAAATTTT GAACTAGAAC
   A  Y  C   N  V  K   T  A  T  D   L  L  K   L  D  L>

         1060        1070        1080        1090        1100
            *           *           *           *           *
CCGATGTCAA CCATAGGAAT CCGAGGGGAT ATACGGTGCT TCATGTTGCT
GGCTACAGTT GGTATCCTTA GGCTCCCCTA TATGCCACGA AGTACAACGA
A  D  V  N   H  R  N   P  R  G   Y  T  V  L   H  V  A>

         1110        1120        1130        1140        1150
            *           *           *           *           *
GCGATGCGGA AGGAGCCACA ATTGATACTA TCTCTATTGG AAAAAGGTGC
CGCTACGCCT TCCTCGGTGT TAACTATGAT AGAGATAACC TTTTTCCACG
 A  M  R   K  E  P  Q   L  I  L   S  L  L   E  K  G  A>

         1160        1170        1180        1190        1200
            *           *           *           *           *
AAGTGCATCA GAAGCAACTT TGGAAGGTAG AACCGCACTC ATGATCGCAA
TTCACGTAGT CTTCGTTGAA ACCTTCCATC TTGGCGTGAG TACTAGCGTT
   S  A  S   E  A  T   L  E  G  R   T  A  L   M  I  A>

         1210        1220        1230        1240        1250
            *           *           *           *           *
AACAAGCCAC TATGGCGGTT GAATGTAATA ATATCCCGGA GCAATGCAAG
TTGTTCGGTG ATACCGCCAA CTTACATTAT TATAGGGCCT CGTTACGTTC
K  Q  A  T   M  A  V   E  C  N   N  I  P  E   Q  C  K>

         1260        1270        1280        1290        1300
            *           *           *           *           *
CATTCTCTCA AAGGCCGACT ATGTGTAGAA ATACTAGAGC AAGAAGACAA
GTAAGAGAGT TTCCGGCTGA TACACATCTT TATGATCTCG TTCTTCTGTT
 H  S  L   K  G  R  L   C  V  E   I  L  E   Q  E  D  K>

         1310        1320        1330        1340        1350
            *           *           *           *           *
ACGAGAACAA ATTCCTAGAG ATGTTCCTCC CTCTTTTGCA GTGGCGGCCG
TGCTCTTGTT TAAGGATCTC TACAAGGAGG GAGAAAACGT CACCGCCGGC
  R  E  Q   I  P  R   D  V  P  P   S  F  A   V  A  A>
```

Fig. 5-3

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          1360        1370        1380        1390        1400
             *           *           *           *           *
ATGAATTGAA GATGACGCTG CTCGATCTTG AAAATAGAGT TGCACTTGCT
TACTTAACTT CTACTGCGAC GAGCTAGAAC TTTTATCTCA ACGTGAACGA
D  E  L  K   M  T  L   L  D  L   E  N  R  V   A  L  A>

          1410        1420        1430        1440        1450
             *           *           *           *           *
CAACGTCTTT TTCCAACGGA AGCACAAGCT GCAATGGAGA TCGCCGAAAT
GTTGCAGAAA AAGGTTGCCT TCGTGTTCGA CGTTACCTCT AGCGGCTTTA
 Q  R  L   F  P  T  E   A  Q  A   A  M  E   I  A  E  M>

          1460        1470        1480        1490        1500
             *           *           *           *           *
GAAGGGAACA TGTGAGTTCA TAGTGACTAG CCTCGAGCCT GACCGTCTCA
CTTCCCTTGT ACACTCAAGT ATCACTGATC GGAGCTCGGA CTGGCAGAGT
  K  G  T   C  E  F   I  V  T  S   L  E  P   D  R  L>

          1510        1520        1530        1540        1550
             *           *           *           *           *
CTGGTACGAA GAGAACATCA CCGGGTGTAA AGATAGCACC TTTCAGAATC
GACCATGCTT CTCTTGTAGT GGCCCACATT TCTATCGTGG AAAGTCTTAG
T  G  T  K   R  T  S   P  G  V   K  I  A  P   F  R  I>

          1560        1570        1580        1590        1600
             *           *           *           *           *
CTAGAAGAGC ATCAAAGTAG ACTAAAAGCG CTTTCTAAAA CCGTGGAACT
GATCTTCTCG TAGTTTCATC TGATTTTCGC GAAAGATTTT GGCACCTTGA
 L  E  E   H  Q  S  R   L  K  A   L  S  K   T  V  E  L>

          1610        1620        1630        1640        1650
             *           *           *           *           *
CGGGAAACGA TTCTTCCCGC GCTGTTCGGC AGTGCTCGAC CAGATTATGA
GCCCTTTGCT AAGAAGGGCG CGACAAGCCG TCACGAGCTG GTCTAATACT
  G  K  R   F  F  P   R  C  S  A   V  L  D   Q  I  M>

          1660        1670        1680        1690        1700
             *           *           *           *           *
ACTGTGAGGA CTTGACTCAA CTGGCTTGCG GAGAAGACGA CACTGCTGAG
TGACACTCCT GAACTGAGTT GACCGAACGC CTCTTCTGCT GTGACGACTC
N  C  E  D   L  T  Q   L  A  C   G  E  D  D   T  A  E>

          1710        1720        1730        1740        1750
             *           *           *           *           *
AAACGACTAC AAAAGAAGCA AAGGTACATG GAAATACAAG AGACACTAAA
TTTGCTGATG TTTTCTTCGT TTCCATGTAC CTTTATGTTC TCTGTGATTT
 K  R  L   Q  K  K  Q   R  Y  M   E  I  Q   E  T  L  K>

          1760        1770        1780        1790        1800
             *           *           *           *           *
GAAGGCCTTT AGTGAGGACA ATTTGGAATT AGGAAATTCG TCCCTGACAG
CTTCCGGAAA TCACTCCTGT TAAACCTTAA TCCTTTAAGC AGGGACTGTC
  K  A  F   S  E  D   N  L  E  L   G  N  S   S  L  T>
```

Fig. 5-4

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      1810        1820        1830        1840        1850
        *           *           *           *           *
ATTCGACTTC TTCCACATCG AAATCAACCG GTGGAAAGAG GTCTAACCGT
TAAGCTGAAG AAGGTGTAGC TTTAGTTGGC CACCTTTCTC CAGATTGGCA
D  S  T  S   S  T  S   K  S  T   G  G  K  R   S  N  R>

      1860        1870        1880        1890        1900
        *           *           *           *           *
AAACTCTCTC ATCGTCGTCG GTGAGACTCT TGCCTCTTAG TGTAATTTTT
TTTGAGAGAG TAGCAGCAGC CACTCTGAGA ACGGAGAATC ACATTAAAAA
 K  L  S   H  R  R  R   *>

      1910        1920        1930        1940        1950
        *           *           *           *           *
GCTGTACCAT ATAATTCTGT TTTCATGATG ACTGTAACTG TTTATGTCTA
CGACATGGTA TATTAAGACA AAAGTACTAC TGACATTGAC AAATACAGAT

      1960        1970        1980        1990        2000
        *           *           *           *           *
TCGTTGGCGT CATATAGTTT CGCTCTTCGT TTTGCATCCT GTGTATTATT
AGCAACCGCA GTATATCAAA GCGAGAAGCA AAACGTAGGA CACATAATAA

      2010        2020        2030        2040        2050
        *           *           *           *           *
GCTGCAGGTG TGCTTCAAAC AAATGTTGTA ACAATTTGAA CCAATGGTAT
CGACGTCCAC ACGAAGTTTG TTTACAACAT TGTTAAACTT GGTTACCATA

      2060        2070        2080        2090        2100
        *           *           *           *           *
ACAGATTTGT AATATATATT TATGTACATC AACAATAAAA AAAAAAAAAA
TGTCTAAACA TTATATATAA ATACATGTAG TTGTTATTTT TTTTTTTTTT

AAAA
TTTT
```

Fig. 5-5

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NPR1	(323)	**N**HR**N**PR**GYT**V**LH**V**AA**M**R**KEPQ**LI**L**S**LLE**K**G**AS**A**SE**A**TLE**GR**TAL**M**IAKQ**	(371)
		N + GYT LH AA + +I LL+ AS +E T+ G TAL IA++	
ankyrin 3	(740)	**NAKTKNGYTALHQAAQQGHTHIINVLLQNNASPNELTVNGNTALAIARR**	(788)
NPR1	(262)	**K**V**K**KH**VS**N**VH**K**A**LDS**D**DI**E**L**VKLLLKE**D**	(289)
		K K +S +H A D + V+LLL+ +	
ankyrin 3	(313)	**KTKNGLSPLHMATQGDHLNCVQLLLSRN**	(340)

Fig. 6A

1st repeat	(265)	**KH**V**SN**V**H**K**AL**DS**DD**I**ELVKLLLKE**D**H**T**N**LDDAC	(297)
2nd repeat	(294)	D**D**AC**ALHFAV**AY**CNVKTATD**LLKL**D**LADVNHRN	(326)
3rd repeat	(328)	R**GYTVLHVAA**M**RKEPQLI**L**S**LLEK**G**AS**A**SEA**T**L	(360)
4th repeat	(361)	E**GRTALMIA**K**QA**T**MAVEC**N**N**I**P**E**Q**C**K**H**SLKGRL	(393)

ANK consensus
(Michaely and Bennett) **G TPLHLAAR GHVEVVKLLLD GADVNA TK**
A I SQ NNLDIAEV K NPD D
V K T M R Q SI N
E

(Bork) **t otLHhAh tt thht LLt t t**

Fig. 6B

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```
        10         20         30         40         50
         *          *          *          *          *
GTGACTTTCT AACTATGGCT GAAATTGCAG AACGAAAAAG ACTTTCCATT
CACTGAAAGA TTGATACCGA CTTTAACGTC TTGCTTTTTC TGAAAGGTAA

        60         70         80         90        100
         *          *          *          *          *
TTTCACTTGA ATGAAACCCA AAATGGAAAT CTATCTCTCT TCTTCTTCTC
AAAGTGAACT TACTTTGGGT TTTACCTTTA GATAGAGAGA AGAAGAAGAG

       110        120        130        140        150
         *          *          *          *          *
TTTTACTACC TCCATTTCCA TGGCTTTCCC TCCTCTACCT TCCCTAGCTC
AAAATGATGG AGGTAAAGGT ACCGAAAGGG AGGAGATGGA AGGGATCGAG

       160        170        180        190        200
         *          *          *          *          *
TTTTCAATTT CTAGAATATT CTTTTCTTAG TCTGTAATTA TCTATAGCTC
AAAAGTTAAA GATCTTATAA GAAAAGAATC AGACATTAAT AGATATCGAG

       210        220        230        240        250
         *          *          *          *          *
AATTTCTAAG ACAGAACTTA TGTAAGGCGG CTTTCTGTAA TGGATAATAG
TTAAAGATTC TGTCTTGAAT ACATTCCGCC GAAAGACATT ACCTATTATC

       260        270        280        290        300
         *          *          *          *          *
TAGGACTGCG TTTTCTGATT CGAATGACAT CAGCGGAAGC AGTAGTATAT
ATCCTGACGC AAAAGACTAA GCTTACTGTA GTCGCCTTCG TCATCATATA

       310        320        330        340        350
         *          *          *          *          *
GCTGCATCGG CGGCGGCATG ACTGAATTTT TCTCGCCGGA GACTTCGCCG
CGACGTAGCC GCCGCCGTAC TGACTTAAAA AGAGCGGCCT CTGAAGCGGC

       360        370        380        390        400
         *          *          *          *          *
GCGGAGATCA CTTCACTGAA ACGCCTATCG GAAACACTGG AATCTATCTT
CGCCTCTAGT GAAGTGACTT TGCGGATAGC CTTTGTGACC TTAGATAGAA

       410        420        430        440        450
         *          *          *          *          *
CGATGCGTCT TTGCCGGAGT TTGACTACTT CGCCGACGCT AAGCTTGTGG
GCTACGCAGA AACGGCCTCA AACTGATGAA GCGGCTGCGA TTCGAACACC

       460        470        480        490        500
         *          *          *          *          *
TTTCCGGCCC GTGTAAGGAA ATTCCGGTGC ACCGGTGCAT TTTGTCGGCG
AAAGGCCGGG CACATTCCTT TAAGGCCACG TGGCCACGTA AAACAGCCGC

       510        520        530        540        550
         *          *          *          *          *
AGGAGTCCGT TCTTTAAGAA TTTGTTCTGC GGTAAAAAGG AGAAGAATAG
TCCTCAGGCA AGAAATTCTT AAACAAGACG CCATTTTTCC TCTTCTTATC
```

Fig. 7A-1

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          560         570         580         590         600
            *           *           *           *           *
TAGTAAGGTG GAATTGAAGG AGGTGATGAA AGAGCATGAG GTGAGCTATG
ATCATTCCAC CTTAACTTCC TCCACTACTT TCTCGTACTC CACTCGATAC

          610         620         630         640         650
            *           *           *           *           *
ATGCTGTAAT GAGTGTATTG GCTTATTTGT ATAGTGGTAA AGTTAGGCCT
TACGACATTA CTCACATAAC CGAATAAACA TATCACCATT TCAATCCGGA

          660         670         680         690         700
            *           *           *           *           *
TCACCTAAAG ATGTGTGTGT TTGTGTGGAC AATGACTGCT CTCATGTGGC
AGTGGATTTC TACACACACA AACACACCTG TTACTGACGA GAGTACACCG

          710         720         730         740         750
            *           *           *           *           *
TTGTAGGCCA GCTGTGGCAT TCCTGGTTGA GGTTTTGTAC ACATCATTTA
AACATCCGGT CGACACCGTA AGGACCAACT CCAAAACATG TGTAGTAAAT

          760         770         780         790         800
            *           *           *           *           *
CCTTTCAGAT CTCTGAATTG GTTGACAAGT TTCAGAGACA CCTACTGGAT
GGAAAGTCTA GAGACTTAAC CAACTGTTCA AAGTCTCTGT GGATGACCTA

          810         820         830         840         850
            *           *           *           *           *
ATTCTTGACA AAACTGCAGC AGACGATGTA ATGATGGTTT TATCTGTTGC
TAAGAACTGT TTTGACGTCG TCTGCTACAT TACTACCAAA ATAGACAACG

          860         870         880         890         900
            *           *           *           *           *
AAACATTTGT GGTAAAGCAT GCGAGAGATT GCTTTCAAGC TGCATTGAGA
TTTGTAAACA CCATTTCGTA CGCTCTCTAA CGAAAGTTCG ACGTAACTCT

          910         920         930         940         950
            *           *           *           *           *
TTATTGTCAA GTCTAATGTT GATATCATAA CCCTTGATAA AGCCTTGCCT
AATAACAGTT CAGATTACAA CTATAGTATT GGGAACTATT TCGGAACGGA

          960         970         980         990        1000
            *           *           *           *           *
CATGACATTG TAAAACAAAT TACTGATTCA CGAGCGGAAC TTGGTCTACA
GTACTGTAAC ATTTTGTTTA ATGACTAAGT GCTCGCCTTG AACCAGATGT

         1010        1020        1030        1040        1050
            *           *           *           *           *
AGGGCCTGAA AGCAACGGTT TTCCTGATAA ACATGTTAAG AGGATACATA
TCCCGGACTT TCGTTGCCAA AAGGACTATT TGTACAATTC TCCTATGTAT

         1060        1070        1080        1090        1100
            *           *           *           *           *
GGGCATTGGA TTCTGATGAT GTTGAATTAC TACAAATGTT GCTAAGAGAG
CCCGTAACCT AAGACTACTA CAACTTAATG ATGTTTACAA CGATTCTCTC
```

Fig. 7A-2

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      1110        1120        1130        1140        1150
       *           *           *           *           *
GGGCATACTA CCCTAGATGA TGCATATGCT CTCCATTATG CTGTAGCGTA
CCCGTATGAT GGGATCTACT ACGTATACGA GAGGTAATAC GACATCGCAT

      1160        1170        1180        1190        1200
       *           *           *           *           *
TTGCGATGCA AAGACTACAG CAGAACTTCT AGATCTTGCA CTTGCTGATA
AACGCTACGT TTCTGATGTC GTCTTGAAGA TCTAGAACGT GAACGACTAT

      1210        1220        1230        1240        1250
       *           *           *           *           *
TTAATCATCA AAATTCAAGG GGATACACGG TGCTGCATGT TGCAGCCATG
AATTAGTAGT TTTAAGTTCC CCTATGTGCC ACGACGTACA ACGTCGGTAC

      1260        1270        1280        1290        1300
       *           *           *           *           *
AGGAAAGAGC CTAAAATTGT AGTGTCCCTT TTAACCAAAG GAGCTAGACC
TCCTTTCTCG GATTTTAACA TCACAGGGAA AATTGGTTTC CTCGATCTGG

      1310        1320        1330        1340        1350
       *           *           *           *           *
TTCTGATCTG ACATCCGATG GAAGAAAAGC ACTTCAAATC GCCAAGAGGC
AAGACTAGAC TGTAGGCTAC CTTCTTTTCG TGAAGTTTAG CGGTTCTCCG

      1360        1370        1380        1390        1400
       *           *           *           *           *
TCACTAGGCT TGTGGATTTC AGTAAGTCTC CGGAGGAAGG AAAATCTGCT
AGTGATCCGA ACACCTAAAG TCATTCAGAG GCCTCCTTCC TTTTAGACGA

      1410        1420        1430        1440        1450
       *           *           *           *           *
TCGAATGATC GGTTATGCAT TGAGATTCTG GAGCAAGCAG AAAGAAGAGA
AGCTTACTAG CCAATACGTA ACTCTAAGAC CTCGTTCGTC TTTCTTCTCT

      1460        1470        1480        1490        1500
       *           *           *           *           *
CCCTCTGCTA GGAGAAGCTT CTGTATCTCT TGCTATGGCA GGCGATGATT
GGGAGACGAT CCTCTTCGAA GACATAGAGA ACGATACCGT CCGCTACTAA

      1510        1520        1530        1540        1550
       *           *           *           *           *
TGCGTATGAA GCTGTTATAC CTTGAAAATA GAGTTGGCCT GGCTAAACTC
ACGCATACTT CGACAATATG GAACTTTTAT CTCAACCGGA CCGATTTGAG

      1560        1570        1580        1590        1600
       *           *           *           *           *
CTTTTTCCAA TGGAAGCTAA AGTTGCAATG GACATTGCTC AAGTTGATGG
GAAAAAGGTT ACCTTCGATT TCAACGTTAC CTGTAACGAG TTCAACTACC

      1610        1620        1630        1640        1650
       *           *           *           *           *
CACTTCTGAG TTCCCACTGG CTAGCATCGG CAAAAAGATG GCTAATGCAC
```

Fig. 7A-3

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```
GTGAAGACTC AAGGGTGACC GATCGTAGCC GTTTTTCTAC CGATTACGTG

      1660        1670        1680        1690        1700
         *           *           *           *           *
AGAGGACAAC AGTAGATTTG AACGAGGCTC CTTTCAAGAT AAAAGAGGAG
TCTCCTGTTG TCATCTAAAC TTGCTCCGAG GAAAGTTCTA TTTTCTCCTC

      1710        1720        1730        1740        1750
         *           *           *           *           *
CACTTGAATC GGCTTAGAGC ACTCTCTAGA ACTGTAGAAC TTGGAAAACG
GTGAACTTAG CCGAATCTCG TGAGAGATCT TGACATCTTG AACCTTTTGC

      1760        1770        1780        1790        1800
         *           *           *           *           *
CTTCTTTCCA CGTTGTTCAG AAGTTCTAAA TAAGATCATG GATGCTGATG
GAAGAAAGGT GCAACAAGTC TTCAAGATTT ATTCTAGTAC CTACGACTAC

      1810        1820        1830        1840        1850
         *           *           *           *           *
ACTTGTCTGA GATAGCTTAC ATGGGGAATG ATACGGCAGA AGAGCGTCAA
TGAACAGACT CTATCGAATG TACCCCTTAC TATGCCGTCT TCTCGCAGTT

      1860        1870        1880        1890        1900
         *           *           *           *           *
CTGAAGAAGC AAAGGTACAT GGAACTTCAA GAAATTCTGA CTAAAGCATT
GACTTCTTCG TTTCCATGTA CCTTGAAGTT CTTTAAGACT GATTTCGTAA

      1910        1920        1930        1940        1950
         *           *           *           *           *
CACTGAGGAT AAAGAAGAAT ATGATAAGAC TAACAACATC TCCTCATCTT
GTGACTCCTA TTTCTTCTTA TACTATTCTG ATTGTTGTAG AGGAGTAGAA

      1960        1970        1980        1990        2000
         *           *           *           *           *
GTTCCTCTAC ATCTAAGGGA GTAGATAAGC CCAATAAGCT CCCTTTTAGG
CAAGGAGATG TAGATTCCCT CATCTATTCG GGTTATTCGA GGGAAAATCC

      2010        2020        2030        2040        2050
         *           *           *           *           *
AAATAGGTAA TTGTATTAGG ATATATGAGG AAGAAGAGGA TTTTCTTGTA
TTTATCCATT AACATAATCC TATATACTCC TTCTTCTCCT AAAAGAACAT

      2060        2070        2080        2090        2100
         *           *           *           *           *
ACATAGCACT CTTTCCTTTC ATCATTTGAT ATGTCAACAT ACATACAACA
TGTATCGTGA GAAAGGAAAG TAGTAAACTA TACAGTTGTA TGTATGTTGT

      2110        2120        2130        2140        2150
         *           *           *           *           *
GCTGTACCAT AAACTTGTAT TGTTGCACTT ACAACTTTGA AGAACAGAAT
CGACATGGTA TTTGAACATA ACAACGTGAA TGTTGAAACT TCTTGTCTTA

      2160        2170
         *           *
TTATTTGAAA AAAAAAAAAA AA
AATAAACTTT TTTTTTTTTT TT
```

Fig. 7A-4

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```
                                                                  50
          *           *           *           *           *
MDNSRTAFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETL

                                                                 100
          *           *           *           *           *
ESIFDASLPEFDYFADAKLVVSGPCKEIPVHRCILSARSPFFKNLFCGKK

                                                                 150
          *           *           *           *           *
EKNSSKVELKEVMKEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDC

                                                                 200
          *           *           *           *           *
SHVACRPAVAFLVEVLYTSFTFQISELVDKFQRHLLDILDKTAADDVMMV

                                                                 250
          *           *           *           *           *
LSVANICGKACERLLSSCIEIIVKSNVDIITLDKALPHDIVKQITDSRAE

                                                                 300
          *           *           *           *           *
LGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTTLDDAYALHY

                                                                 350
          *           *           *           *           *
AVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTK

                                                                 400
          *           *           *           *           *
GARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQA

                                                                 450
          *           *           *           *           *
ERRDPLLGEASVSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIA

                                                                 500
          *           *           *           *           *
QVDGTSEFPLASIGKKMANAQRTTVDLNEAPFKIKEEHLNRLRALSRTVE

                                                                 550
          *           *           *           *           *
LGKRFFPRCSEVLNKIMDADDLSEIAYMGNDTAEERQLKKQRYMELQEIL

          *           *           *
TKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNKLPFRK
```

Fig. 7B

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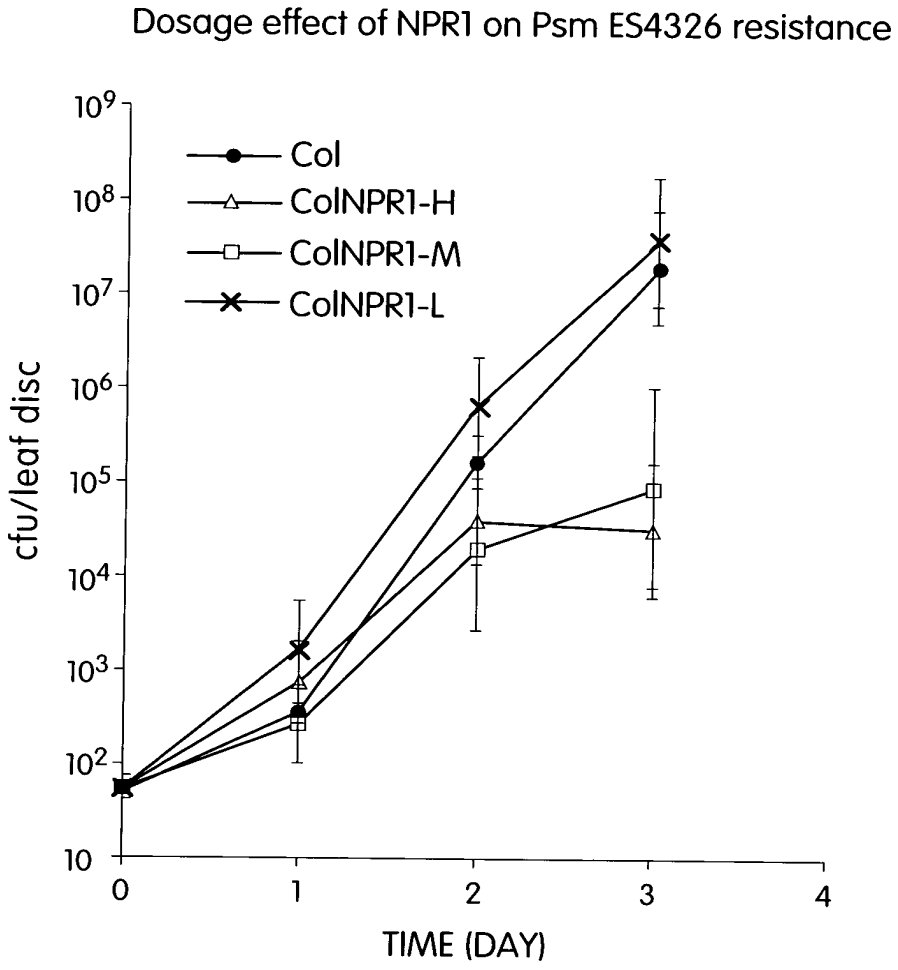

Fig. 8A

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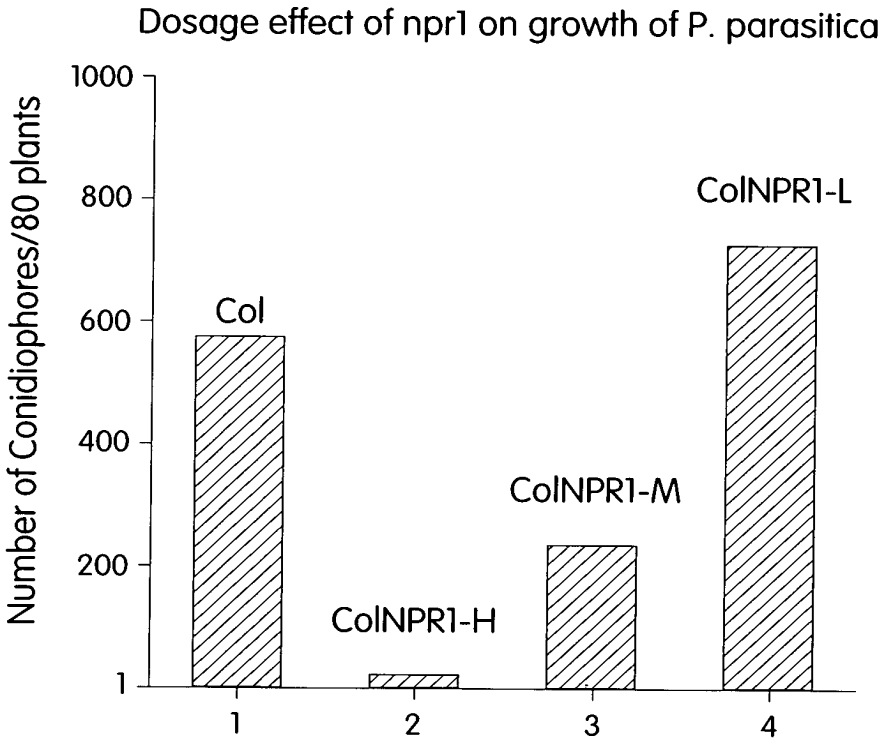

Fig. 8B

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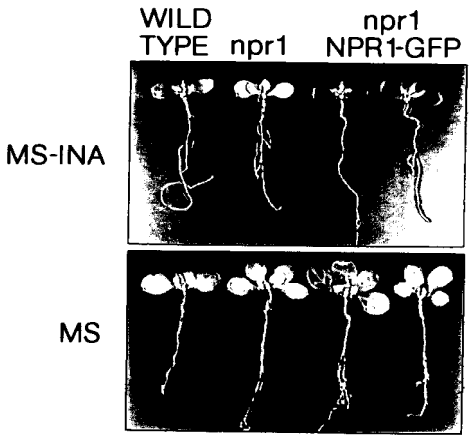

Fig. 9A

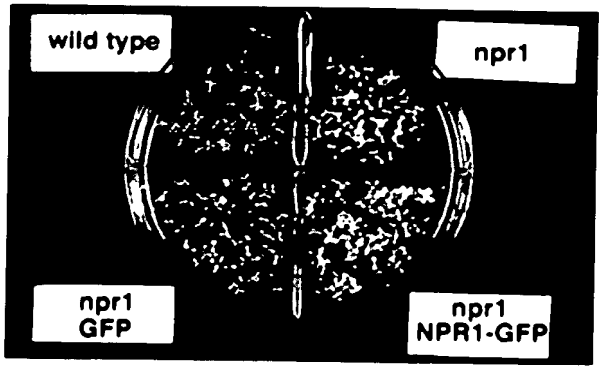

Fig. 9B

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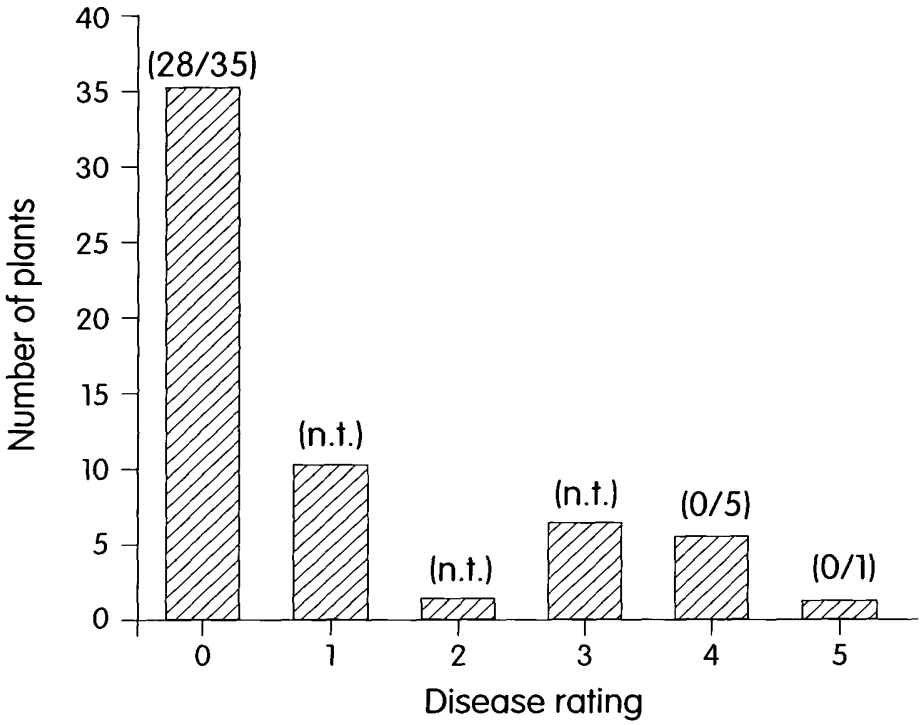

Fig. 9C

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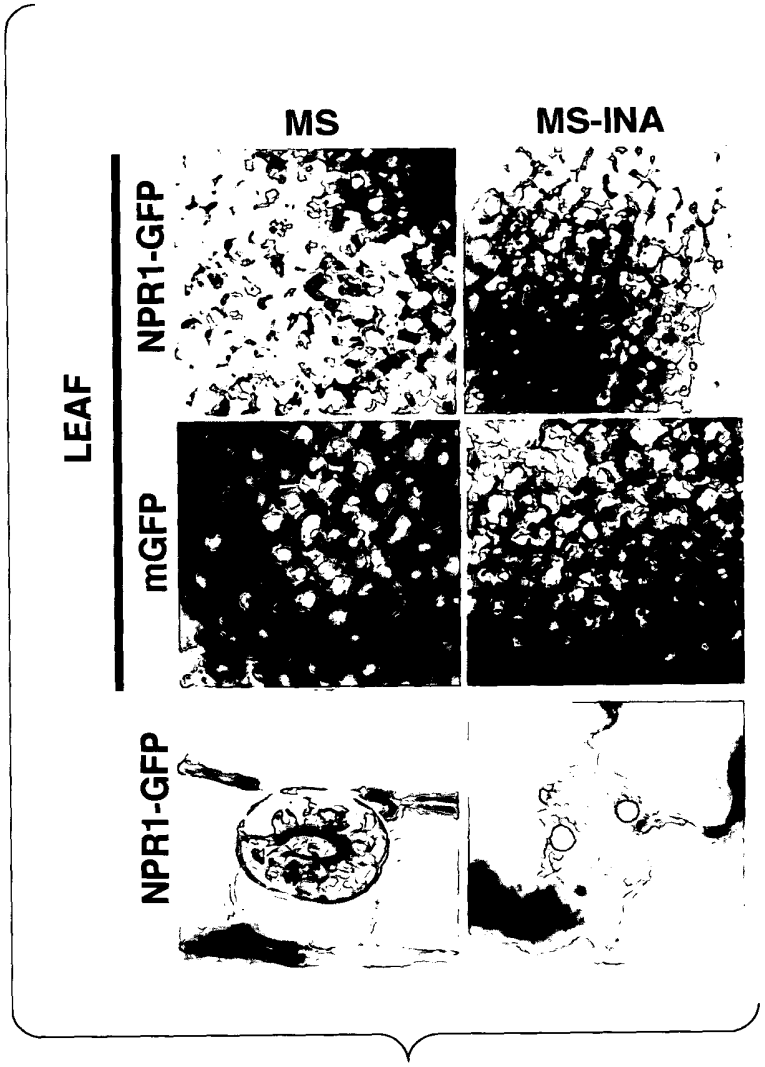

Fig 10

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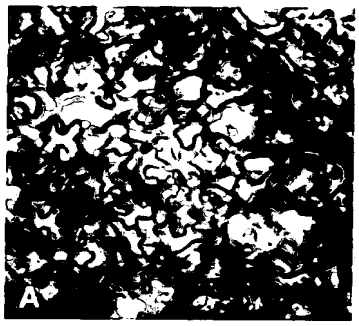

Fig. 11A

Fig. 11B

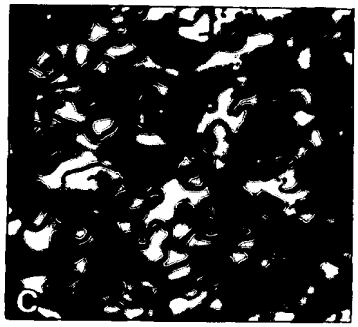

Fig. 11C

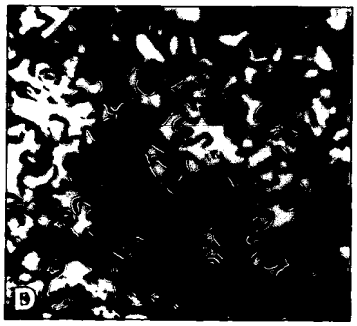

Fig. 11D

Fig. 11E

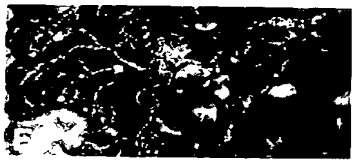

Fig. 11F

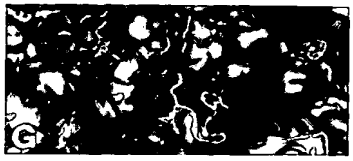

Fig. 11G